

# EXHIBIT J

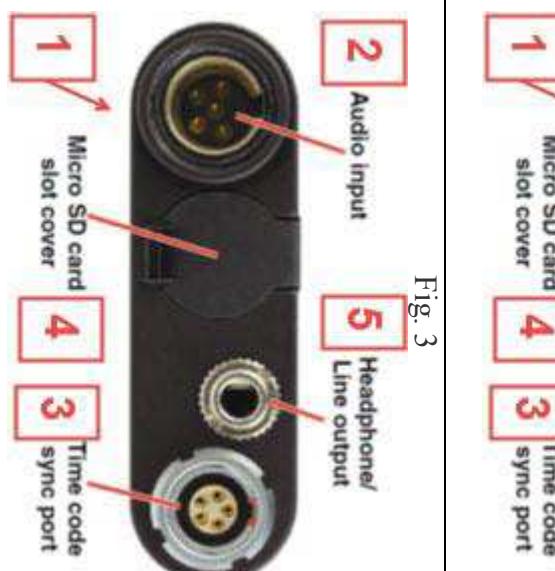
**EXHIBIT J**  
**Claim Chart – U.S. Patent No. 7,929,902**



Fig. 1

CLAIM ELEMENTS	DISCUSSION	INFRINGEMENT LETROSONICS DEVICE
Claim 7. A system for recording locally generated audio comprising:	The PDR does not include a master timecode generator, but includes a time code sync port (3) specifically designed to connect with a master timecode generator.	Ex. L (PDR Manual), page 7, TC Jam, describes how the user can plug a time code source into the time code sync port for the purpose of allowing the PDR to receive a time code from the time code generator.
at least one local audio device wearable by a creator of said locally generated audio including.	The PDR is a local audio device wearable by a creator of said locally generated audio.	Ex. L (PDR Manual), page 2, Introduction: “The recorder is unobtrusive and easily hidden in garments and costumes.”

**EXHIBIT J**  
**Claim Chart – U.S. Patent No. 7,929,902**

<p>at least one local audio device receiver for receiving at least one of the group consisting of digital commands and said master timecodes;</p>	<p>The PDR includes time code sync port (3) for receiving timecodes.</p>	 <p>Fig. 2</p>
<p>at least one audio input port for receiving locally generated audio from an audio input device; The audio input device is a microphone wearable by a creator of said locally generated audio.</p>	<p>The PDR includes an audio input (2) for receiving said locally generated audio from an audio input device. The audio input device is a microphone wearable by a creator of said locally generated audio.</p>	 <p>Fig. 3</p>
<p>at least one memory;</p>	<p>The PDR includes a microSD memory card (4)</p>	

**EXHIBIT J**  
**Claim Chart – U.S. Patent No. 7,929,902**

Fig. 5



Insert the card with the label facing the keypad side of the recorder.

	<p>at least one local timecode generator for generating a plurality of local timecodes; and</p>	<p>The PDR necessarily includes a control unit electrically coupled to said local audio device receiver. Said audio input device, said memory, and said local timecode generator for creating stamped local audio data and storing said stamped local</p>	<p>Ex. L (PDR Manual), page 7, TC Jam: “Timecode defaults to zero at power up if no timecode source is used to jam the unit,” and page 7, Date &amp; Time “Date and time are preserved during battery changes and independent of the timecode.”</p> <p>The PDR processing unit to operate the “firmware” in the PDR.</p> <p>The local audio data is stamped with time data in the file name. Ex. L (PDR Manual), page 7, File Naming: “Filenames of the recordings can be set as a progressive sequence of numbers or as the time of the internal clock at the beginning of the recording,” and page 7, Date &amp; Time “Date and time are preserved in the file attributes, timecode is written inside the file.”</p>
--	---	---	--

**EXHIBIT J**  
**Claim Chart – U.S. Patent No. 7,929,902**

audio data in said memory;	audio data in said memory.	
wherein said stamped local audio data includes at least one local timestamp to reference at least a portion of said stamped local audio data to at least one of said local timecodes; and	The PDR local audio data necessarily includes at least one local timestamp to reference at least a portion of said stamped local audio data to at least one of said local timecodes.	Ex. L (PDR Manual), page 7, Date & Time: “Date and time are preserved in the file attributes, timecode is written inside the file.”
wherein said stamped local audio data includes at least one identifier selected from the group consisting of track identifiers, local audio device identifiers, performer identifiers, and combinations thereof.	The local audio file includes at least a track identifier (e.g., file attributes, metadata, and filename).	Ex. L (PDR Manual), page 7, TC Jam: “Timecode data is logged into the BWF metadata,” page 7, File Naming: “Filenames of the recordings can be set as a progressive sequence of numbers or as the time of the internal clock at the beginning of the recording,” and page 7, Date & Time: “Date and time are preserved in the file attributes, timecode is written inside the file.”

{00042941}

**EXHIBIT J**  
Claim Chart – U.S. Patent No. 7,929,902

<p>to claim 7, wherein said master timecode includes at least one of the group consisting of time data, frame data, timecode type, recorder transport status, name of scene, name of take, track identifier, and combinations thereof.</p>	<p>at least time data and a track identifier (e.g., file attributes, metadata, filename).</p> <p>Ex. L (PDR Manual), page 7, TC Jam “Timecode data is logged into the BWF metadata,” File Naming “Filenames of the recordings can be set as a progressive sequence of numbers or as the time of the internal clock at the beginning of the recording,” and Date &amp; Time “Date and time are preserved in the file attributes, timecode is written inside the file.”</p>
<p>Claim 12. A method of wirelessly recording local audio, said method comprising:</p>	<p>The Lectrosonics PDR (1) is an apparatus for recording locally generated audio. The PDR (1) receives local audio and transmits it from headphone/line output (5) via an MC70 adaptor cable to the audio input port (8) of the Lectrosonics SMV (7). The Lectrosonics SMV</p>



Fig. 6

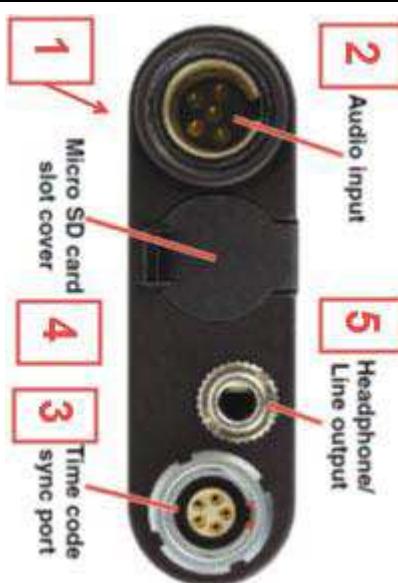
**EXHIBIT J**  
 Claim Chart – U.S. Patent No. 7,929,902

then wirelessly transmits the local audio to at least a receiver.

A Lectrosonics PDR (1) is coupled to a Lectrosonics SMV Transmitter via a Lectrosonics MC70 Adaptor cable. The PDR receives local audio and the SMV wirelessly transmits to, e.g., a recorder.

The PDR includes an audio input (2) for receiving said locally generated audio from an audio input device such as a lavaliere microphone. The audio input device is a microphone wearable by a creator of said locally generated audio.

Fig. 7



Upon information and belief, Lectrosonics sells an MC70 cable designed to permit the PDR (1) to be coupled to a wireless transmitter (such as a Lectrosonics SM transmitter) for wirelessly coupling the PDR (1) to a remote receiver/recorder.

**EXHIBIT J**  
Claim Chart – U.S. Patent No. 7,929,902

Fig. 8



Ex. M (MC70 Cable Page) at 1; see also Ex. H (Gotham PDR Demo) (<https://www.youtube.com/watch?v=F1x1mQgxY8k>).

A first end of the MC70 Adaptor cable connects to the headphone/line output (5) of the PDR (1) and a second end of the MC70 Adaptor cable connects to the audio input (8) of the SMV (7).

**EXHIBIT J**  
Claim Chart – U.S. Patent No. 7,929,902

Fig. 9



The SMV may be worn by a user. See Ex. O (SMV Instruction Manual), page 20, Accessories for Single Battery Models and Accessories for Dual Battery Models indicating that the SMV is able to be worn on a belt.

The SMV transmits local audio to receivers. See Ex. O (SMV Instruction Manual), page 2, Introduction, indicating that the SMV is used with a receiver.

{00042941}

**EXHIBIT J**  
**Claim Chart – U.S. Patent No. 7,929,902**

Fig. 10

## **Introduction**

The SM Series variable power transmitters are the product of many years of engineering and experience in professional audio markets. The unique design provides several distinct features for professional applications:

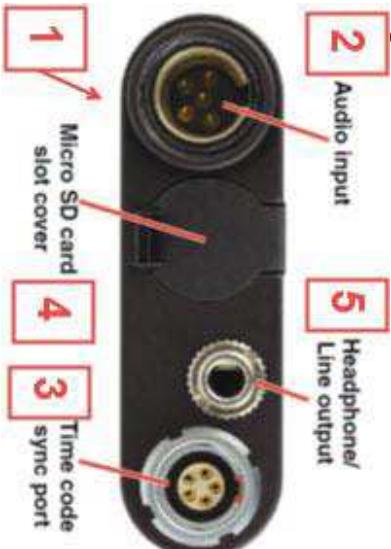
- Selectable output power to maximize battery life or operating range as needed
- Superb, compandor-free audio quality
- Ultra-lightweight, corrosion resistant housing
- Water resistant seals for use in damp environments
- Programmable compatibility modes for use with a wide variety of different receivers

The Digital Hybrid Wireless® design (US Patent 7,225,135) combines 24-bit digital audio with analog FM resulting in a system that has the same operating range as analog systems, the same spectral efficiency as analog systems, the same long battery life as analog systems, plus the excellent audio fidelity typical of pure digital systems.

The SM Series transmitters feature the unique servo bias input circuitry with a standard TA5M type input jack for use with electret lavaliere mics, dynamic mics, or line level signals. A water resistant control panel with LCD, membrane switches and multi-color LEDs make input gain adjustments, frequency and compatibility mode selection quick and accurate, without having to view the receiver. The battery compartment accepts AA lithium or rechargeable batteries. The housings are machined from solid aluminum blocks to provide an extremely lightweight and rugged package. A special non-corrosive finish resists salt water exposure and perspiration in extreme environments.

The DSP-based design works with all Digital Hybrid receivers, and is backward compatible for use with Lectrosonics 200 Series, 100 Series, IFB receivers and some other brands of analog wireless receivers.

**EXHIBIT J**  
**Claim Chart – U.S. Patent No. 7,929,902**

<p>locally receiving said local audio generated by at least one performer during an audio event;</p> <p>The PDR (1) includes an Audio Input (2) for receiving locally generated audio from an audio input device (e.g., a wearable microphone, such as a wearable lavalier microphone).</p>	<p>The PDR (1) includes an Audio Input (2) for receiving locally generated audio from an audio input device (e.g., a wearable microphone, such as a wearable lavalier microphone).</p>
<p><b>Fig. 11</b></p> <p><b>Versatility and Compatibility</b></p> <p>The PDR recorder can be tethered to a camera to capture a higher quality or backup audio recording. The headphone output doubles as a line output to feed the AV input on a camera.</p> <p>The input connector is the industry standard TA5M jack that accepts any mic or line level signal, and provides bias voltage to power a wide variety of electret lavaliere microphones. The input connection and wiring is compatible with microphones pre-wired for "compatible" and "servo bias" configurations to feed 5-pin inputs on Lectrosonics wireless microphone transmitters.</p> <p>Ex. L (PDR Manual) at 2.</p> <p>Fig. 12</p>  <p>1 Micro SD card slot cover      2 Audio input      3 Time code sync port      4 Headphone/Line output      5 TA5M jack</p>	

**EXHIBIT J**  
Claim Chart – U.S. Patent No. 7,929,902

Fig. 13

The audio input circuitry is the essentially the same as on Lectrosonics SM and L Series transmitters. Any microphone wired as Lectrosonics “compatible” or “servo bias” will work with the PDR. See page 10 for details.

*Id.* at 4.

Fig. 14

## **5-Pin Input Jack Wiring**

The wiring diagrams included in this section represent the basic wiring necessary for the most common types of microphones and other audio inputs. Some microphones may require extra jumpers or a slight variation on the diagrams shown.

**EXHIBIT J**  
 Claim Chart – U.S. Patent No. 7,929,902

Fig. 15

**Audio input jack wiring:**

**PIN 1**

Shield (ground) for positive biased electret lavalier microphones. Shield (ground) for dynamic microphones and line level inputs.

**PIN 2**

Bias voltage source for positive biased electret lavalier microphones that are not using servo bias circuitry and voltage source for 4 volt servo bias wiring.

**PIN 3**

Microphone level input and bias supply.

**PIN 4**

Bias voltage selector for Pin 3.  
*Pin 3 voltage depends on Pin 4 connection.*

Pin 4 tied to Pin 1: 0 V

Pin 4 Open: 2 V

Pin 4 to Pin 2: 4 V

**PIN 5**

Line level input for tape decks, mixer outputs, musical instruments, etc.

*Id. at 10.*

Fig. 16

**Input**

**Type:**

Analog mic/line level compatible;  
 servo bias preamp for 2V and 4V lavalier  
 microphones

- Dynamic mic: 0.5 mV to 50 mV
- Electret mic: (need spec in uA?)
- Line level: 17 mV to 1.7V

**Input connector:**

TA5M 5-pin male

*Id. at 11.*

**EXHIBIT J**  
 Claim Chart – U.S. Patent No. 7,929,902

Fig. 17

## Introduction

Congratulations on your purchase of the PDR (Personal Digital Recorder). On occasion, there is a need to record audio in circumstances where a traditional full sized recorder is impractical or even impossible.

Whether it might be an extreme sport, a public speaking event, a wedding or a next to impossible location sound recording, the PDR is designed for the difficult audio capture. When talent is at an extreme distance or using a wireless microphone is not practical (knights in armor come to mind), the PDR can travel with your subject and record professional quality audio, synchronized with timecode. The recorder is unobtrusive and easily hidden in garments and costumes, and easy to conceal when used as a "plant" microphone to capture environmental or location sound.

Ex. L (PDR Manual) at 2.

wirelessly transmitting said local audio to at least one of the group consisting of a recorder, a receiver, and combinations thereof,	<p>Lectrosonics Super Miniature Variable Power Transmitter ("SMV") in combination with the PDR is capable of wirelessly transmitting local audio to a receiver.</p> <p>The SMV transmits local audio to receivers. See Ex. O (SMV Instruction Manual), page 2, Introduction, indicating that the SMV is used with a receiver.</p>

**EXHIBIT J**  
**Claim Chart – U.S. Patent No. 7,929,902**

Fig. 18

## **Introduction**

The SM Series variable power transmitters are the product of many years of engineering and experience in professional audio markets. The unique design provides several distinct features for professional applications:

- Selectable output power to maximize battery life or operating range as needed
- Superb, compandor-free audio quality
- Ultra-lightweight, corrosion resistant housing
- Water resistant seals for use in damp environments
- Programmable compatibility modes for use with a wide variety of different receivers

The Digital Hybrid Wireless® design (US Patent 7,225,135) combines 24-bit digital audio with analog FM resulting in a system that has the same operating range as analog systems, the same spectral efficiency as analog systems, the same long battery life as analog systems, plus the excellent audio fidelity typical of pure digital systems.

The SM Series transmitters feature the unique servo bias input circuitry with a standard TA5M type input jack for use with electret lavalier mics, dynamic mics, or line level signals. A water resistant control panel with LCD, membrane switches and multi-color LEDs make input gain adjustments, frequency and compatibility mode selection quick and accurate, without having to view the receiver. The battery compartment accepts AA lithium or rechargeable batteries. The housings are machined from solid aluminum blocks to provide an extremely lightweight and rugged package. A special non-corrosive finish resists salt water exposure and perspiration in extreme environments.

The DSP-based design works with all Digital Hybrid receivers, and is backward compatible for use with Lectrosonics 200 Series, 100 Series, IFB receivers and some other brands of analog wireless receivers.

**EXHIBIT J**  
**Claim Chart – U.S. Patent No. 7,929,902**

Fig. 19



Insert the card with the label facing the keypad side of the recorder.

locally recording said local audio as local audio data in at least one memory of at least one local audio device; and

Fig. 20

**6) Adjust Transmitter Input Gain**

NOTE: This adjustment is very important, since it will determine the signal to noise ratio and dynamic range that the system will deliver.

**Lectrosonics transmitters with LCD Interface:**

The LEDs on the control panel provide an accurate indication of modulation level to assist in adjusting the input gain. The LEDs will glow either red or green to indicate modulation levels as shown in the following table. Full modulation is achieved at 0 dB, when the “-20” LED first turns red. The limiter can clearly handle peaks up to 30 dB above this point.

Signal Level	-20 LED	-10 LED
Less than -20 dB	Off	Off
-20 dB to -10 dB	Green	Off
-10 dB to +0 dB	Green	Green
+0 dB to +10 dB	Red	Green
Greater than +10 dB	Red	Red

NOTE: It is best to go through the following procedure with the transmitter in the standby mode so that no audio will enter the sound system or recorder during adjustment.

- With fresh batteries in the transmitter and power the unit on in the standby mode (a brief press on the power switch with L-Series transmitters).
- Navigate to the **Gain** setup screen.
- Prepare the signal source. Position a microphone the way it will be used in actual operation and have the user speak or sing at the loudest level that will occur during use, or set the output level of the instrument or audio device to the maximum level that will be used.
- Use the **③** and **④** arrow buttons to adjust the gain until the **-10 dB** glows green and the **-20 dB** LED starts to flicker red during the loudest peaks in the audio.
- Once the transmitter input gain has been set, the signal can be sent to the sound system or recorder for level adjustments, monitor settings, etc.
- Do not use the transmitter input gain control to adjust the audio output level of the receiver.

remotely recording said transmitted local audio via at least one of the group consisting of a recorder, a receiver, and combinations thereof as remote audio data;	The Lectrosonics LR Digital Hybrid Receiver is compatible with the SMV and receives the local audio data from the SMV and records it as remote audio data.	<p><b>Fig. 20</b></p> <p><b>6) Adjust Transmitter Input Gain</b></p> <p><u>NOTE:</u> This adjustment is very important, since it will determine the signal to noise ratio and dynamic range that the system will deliver.</p> <p><b>Lectrosonics transmitters with LCD Interface:</b></p> <p>The LEDs on the control panel provide an accurate indication of modulation level to assist in adjusting the input gain. The LEDs will glow either red or green to indicate modulation levels as shown in the following table. Full modulation is achieved at 0 dB, when the “-20” LED first turns red. The limiter can clearly handle peaks up to 30 dB above this point.</p> <table border="1"> <thead> <tr> <th>Signal Level</th> <th>-20 LED</th> <th>-10 LED</th> </tr> </thead> <tbody> <tr> <td>Less than -20 dB</td> <td>Off</td> <td>Off</td> </tr> <tr> <td>-20 dB to -10 dB</td> <td>Green</td> <td>Off</td> </tr> <tr> <td>-10 dB to +0 dB</td> <td>Green</td> <td>Green</td> </tr> <tr> <td>+0 dB to +10 dB</td> <td>Red</td> <td>Green</td> </tr> <tr> <td>Greater than +10 dB</td> <td>Red</td> <td>Red</td> </tr> </tbody> </table> <p><u>NOTE:</u> It is best to go through the following procedure with the transmitter in the standby mode so that no audio will enter the sound system or recorder during adjustment.</p> <ol style="list-style-type: none"> <li>With fresh batteries in the transmitter and power the unit on in the standby mode (a brief press on the power switch with L-Series transmitters).</li> <li>Navigate to the <b>Gain</b> setup screen.</li> <li>Prepare the signal source. Position a microphone the way it will be used in actual operation and have the user speak or sing at the loudest level that will occur during use, or set the output level of the instrument or audio device to the maximum level that will be used.</li> <li>Use the <b>③</b> and <b>④</b> arrow buttons to adjust the gain until the <b>-10 dB</b> glows green and the <b>-20 dB</b> LED starts to flicker red during the loudest peaks in the audio.</li> <li>Once the transmitter input gain has been set, the signal can be sent to the sound system or recorder for level adjustments, monitor settings, etc.</li> <li>Do not use the transmitter input gain control to adjust the audio output level of the receiver.</li> </ol>	Signal Level	-20 LED	-10 LED	Less than -20 dB	Off	Off	-20 dB to -10 dB	Green	Off	-10 dB to +0 dB	Green	Green	+0 dB to +10 dB	Red	Green	Greater than +10 dB	Red	Red
Signal Level	-20 LED	-10 LED																		
Less than -20 dB	Off	Off																		
-20 dB to -10 dB	Green	Off																		
-10 dB to +0 dB	Green	Green																		
+0 dB to +10 dB	Red	Green																		
Greater than +10 dB	Red	Red																		

**EXHIBIT J**  
**Claim Chart – U.S. Patent No. 7,929,902**

**Fig. 21**

The local audio data may be retrieved from the microSD memory card (4) by placement into a compatible memory reader and thereafter combined with the remotely recorded remote audio data as taught by Lectrosonics. Ex. H (Gotham PDR Demo) (<https://www.youtube.com/watch?v=F1x1mQgxy8k>).

You can select the line output which then fixes the level at the line output level and you could then cascade that out to another recorder, a back-up unit, a transmitter, a camera, anything you want. And there is an accessory cable to go to a transmitter that goes to a TA5 type input and if you set the transmitter to 22 which is the factory default you have unity gain through your system. Ex. G (Lectrosonics PDR Q&A) (<https://www.youtube.com/watch?v=5XRoFd6-qcg&sns=em>) (10:27)

<p>wherein at least a portion of said local audio data is retrieved during or subsequent to said audio event and is combined with said remote audio data;</p>	<p><b>Fig. 21</b></p> <p>Insert the card with the label facing the keypad side of the recorder.</p>
<p>wherein said local audio data includes at least one identifier selected from the group consisting of track identifiers, local audio device identifiers,</p>	<p>The local audio file includes at least a track identifier (e.g., file attributes, metadata, and filename). Ex. L (PDR Instruction Manual), page 7, TC Jam: "Timecode data is logged into the BWF metadata," page 7, File Naming: "Filenames of the recordings can be set as a progressive sequence of numbers or as the time of the internal clock at the beginning of the recording," and page 7, Date &amp; Time: "Date and time are preserved in the file attributes, timecode is written inside the file."</p>

{00042941}

**EXHIBIT J**  
Claim Chart – U.S. Patent No. 7,929,902

performer identifiers, and combinations thereof.
---